

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1, 2A, 2B, 3A and 3B, which have been designated "prior art" as requested by the Examiner.

The proposed changes accompanying the previous amendment are also again requested to be approved based upon the explanation which follows in the Remarks/Argument section.

Attachments: Replacement Sheets (4)
Annotated Sheets Showing Changes (4)

REMARKS/ARGUMENTS

This paper is submitted responsive to the Office Action mailed December 20, 2005. Reconsideration of this application in light of the accompanying remarks and amendments is courteously solicited.

In the aforesaid action, the Examiner took the following steps, each of which is discussed below under a corresponding heading.

1. The Examiner required amendment of Figures 1, 2A, 2B, 3A and 3B to designate --Prior Art--.
2. The Examiner declined to enter the previous proposed drawing corrections as drawn to new matter.
3. The Examiner held the change of "equiangular" to "conformal", "unit strip" to "cell wall", and "perimeter strips encircling intersecting inner strips" from page 12 as either unnecessary or new matter.
4. The Examiner rejected claims 1-8 as drawn to new matter based upon "perimeter strips encircling the intersecting inner strips".
5. The Examiner rejected claims 7 and 8 as drawn to new matter, apparently based upon the claimed grid springs.
6. The Examiner rejected claims 3-5 as indefinite.
7. The Examiner rejected claims 1-5 over prior art.

Each of these rejections will be discussed in the order listed.

- 1. The Examiner required amendment of Figures 1, 2A, 2B, 3A and 3B.**

The requested change to the drawings has been made and this objection is therefore believed to be resolved.

2. The Examiner declined to enter the previous proposed drawing corrections.

Reconsideration of this holding is respectfully requested. The Examiner gives as his reasoning that "[t]he original disclosure does not specifically state that each of the four sides or perimeter strips of the grid, made up of a plurality of separate individual portions which are welded or somehow joined together to form each of the four sides of the grid as shown for example in Figure 5B".

The Examiner has not pointed to any proposed change to the figures which constitutes new matter. Nevertheless, the statements of the Examiner will be addressed as they may relate to later issues.

The proposed drawing change which the Examiner has declined to enter does not change the structure at all from what was shown in the original figures. The only change is to reference numerals.

Figure 5B referred to by the Examiner was in the application as filed and can be viewed in the original drawings available on PAIR.

Further, the specification does clearly disclose the mentioned subject matter. Attention is directed to the specification as originally filed, which is available from the scanned file on PAIR, for example to page 2, lines 13-17, and to page 13, line 23 through page 14, line 4.

The Examiner also points out that the above-described structure is conventional. This is not relevant to the issue of drawing corrections, and the Examiner's reason for mentioning same is not understood. For the record, Applicant agrees that forming of the four outer sides of the grid as a single strip is shown in the prior art. The method of construction of the outer

strips is virtually irrelevant to the present invention, and is likewise irrelevant to the issue of whether the proposed drawing corrections should be approved.

Based upon the foregoing, it is submitted that the drawing changes previously submitted are entirely proper and clearly do NOT introduce new matter. Approval of these drawing corrections is again respectfully solicited.

3. The Examiner held the change of "equiangular" to "conformal", "unit strip" to "cell wall", and "perimeter strips encircling intersecting inner strips" from page 12 as either unnecessary or new matter.

In connection with the "equiangular" and "unit strip" language, Applicant agrees with the Examiner that the corresponding "conformal" and "cell wall" language means exactly the same thing and therefore that the amendment was not necessary. However, these changes were requested by the original Examiner, and discussion of this is reflected in the Interview Summary Record. First, for the record and for purposes of claim construction, the Applicant considers these terms to mean exactly the same thing. For purposes of claim construction, there is no issue whatsoever of their meaning as this paper forms part of the public record. With that being understood, the Applicant would prefer to keep the amended language solely from the standpoint of compact prosecution. Nevertheless, if the Examiner would prefer amendment back to the original language, Applicant will agree to do so.

As to the amendment to page 12 of the specification, as discussed above in Section 2, this is clearly not new matter. The amendment makes the sentence in question less awkward, but clearly does not add new matter. The specification as filed

manifestly discloses this subject matter.

Based upon the foregoing, it is submitted that fairness to the Applicant and conservation of resources of both the USPTO and the Applicant justify leaving the amendments to "equiangular" and "unit strips" as is. As to the perimeter strips encircling intersecting inner strips, it is hoped that this clearly erroneous objection is resolved.

4. The Examiner rejected claims 1-8 as drawn to new matter based upon "perimeter strips encircling the intersecting inner strips".

This is clearly not new matter. Reference is respectfully directed to the discussion in Sections 2 and 3 above, as well as the originally filed specification at page 2, lines 13-17 and the paragraph bridging pages 13-14. Withdrawal of this rejection is entirely appropriate and respectfully requested.

5. The Examiner rejected claims 7 and 8 as drawn to new matter, apparently based upon the claimed grid springs.

The subject matter of claims 7 and 8 is clearly not new matter. While it is not understood from the Office Action exactly what is considered by the Examiner to be new matter, a general explanation of the subject matter of claims 7 and 8 and location of support in the specification as filed will be provided.

Claim 7 depends from claim 1. Claim 1 calls for the perimeter strips to have cell walls which contain a grid spring. Figure 7A shows one cell wall having vertical support part 51 supporting fuel rod support part 52. This is the structure called for in claim 1. Claim 7 further limits claim 1 by calling for the inner strips to have inner grid springs each of

which comprise an inner support part and an inner fuel rod support part on the inner support part. The inner support part is shown in Figure 6 at reference number 21. Claim 7 calls for inner support part 21 to be different from vertical support part 51. Claim 8 further recites that the vertical support part has a higher spring strength than the inner support part. This is clearly disclosed in the specification, for example at page 20, lines 3-19 of the originally filed specification. Clearly, this subject matter is not new matter. Withdrawal of the rejection of claims 7 and 8 under 35 USC 112, first paragraph, is respectfully solicited.

6. The Examiner rejected claims 3-5 as indefinite.

The Examiner has held that the specification fails to structurally distinguish "coolant flow guide vanes" and "guide taps". Reconsideration of this point is respectfully requested. The specification makes clear that the guide taps are smaller than the guide vanes. This is stated to be so that the guide taps will affect flow differently than the guide vanes. Clearly different structure is shown in the drawings. It is believed that this claim language is sufficiently definite that a person skilled in the art could readily determine the metes and bounds of the claim. Withdrawal of the rejection under 35 USC 112, second paragraph, is respectfully requested.

7. The Examiner rejected claims 1-5 over prior art.

The Examiner rejected claims 1-3 as anticipated by "Oh et al (US 2005/0105677 A1)". The Examiner also rejected claims 3 and 4 as obvious over Oh et al in view of US 5,303,276 (DeMario et al). Finally, the Examiner rejected claim 5 as obvious over Oh et al in view of DeMario et al and US 4,224,107 (Delafosse et

al). No art rejection was made in connection with claims 6-8.

Initially, it is noted that the publication number recited by the Examiner as the basis for the rejection is in fact the publication document from the present application. Obviously, the publication of the present application cannot be used as prior art against that very application. It is believed that the Examiner intended to rely upon US 6,393,087 to Oh et al.

If this is not the case, a new Office Action properly identifying the art relied upon is appropriate and respectfully requested.

Turning to Oh et al, the structure referred to by the Examiner does not anticipate claim 1. Claim 1 calls for the fuel rod support part to be bent to have a conformal support surface which is conformal to the fuel rod supported by the grid spring. A review of the structure of Figures 5 and 6 of Oh et al, which were referred to by the Examiner, shows structure which is clearly not conformal with the rod. Claim 1 is not anticipated by Oh et al.

Claim 2 is likewise not anticipated due at least to its dependency from claim 1. Further, the Examiner's interpretation of the two horizontal lines in Figures 5 and 8 of Oh et al is noted, but reconsideration is requested. First, Figure 8 does not show relevant structure. As to Figure 5, the fold lines there are between the edge of the opening and the central portion 12. Claim 2 requires (from claim 1) a support part which extends vertically in the opening, and for that support part to be bent. No structure in Oh et al matches this requirement. Claim 2 is not anticipated by Oh et al.

Turning to claim 3-5, these claims are believed patentable based upon dependence from claim 1 and the arguments supporting same.

Claims 6-8 were not rejected over any art of record. Should the Examiner believe that any of these claims should be rejected over prior art, it is noted that any such rejection must be non-final in nature.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

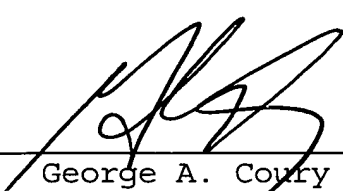
It is submitted that the claims as pending herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,

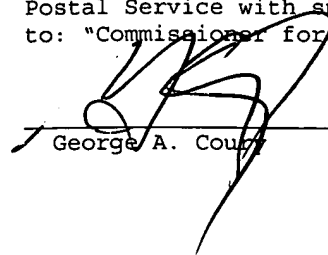
Kyung-Ho Yoon et al.

By


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Date: June 20, 2006

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on June 20, 2006


George A. Coury



Annotated Sheet Showing Changes

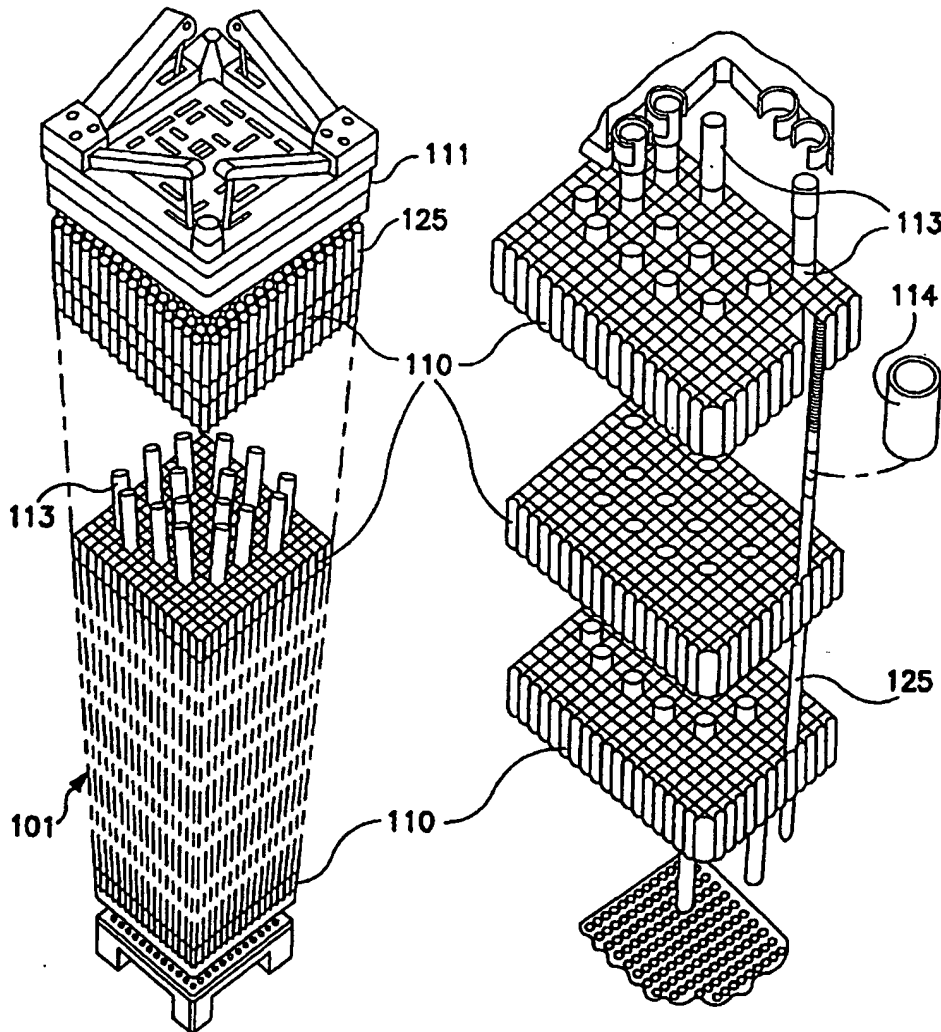
FIGURES

1/14

Fig. 1

(Prior Art)

Added



Annotated Sheet Showing Changes

2/14

Fig. 2A

(Prior Art)

Added

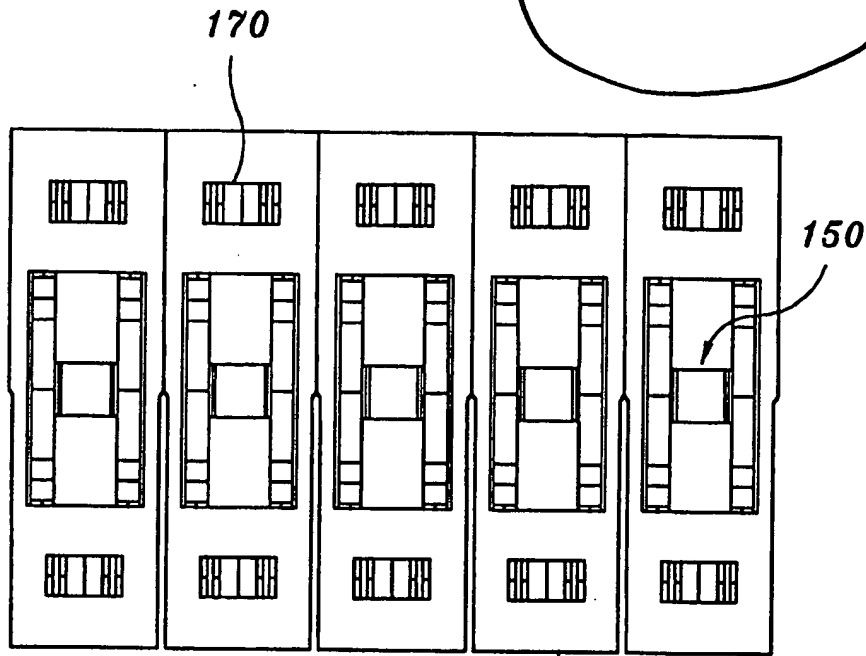
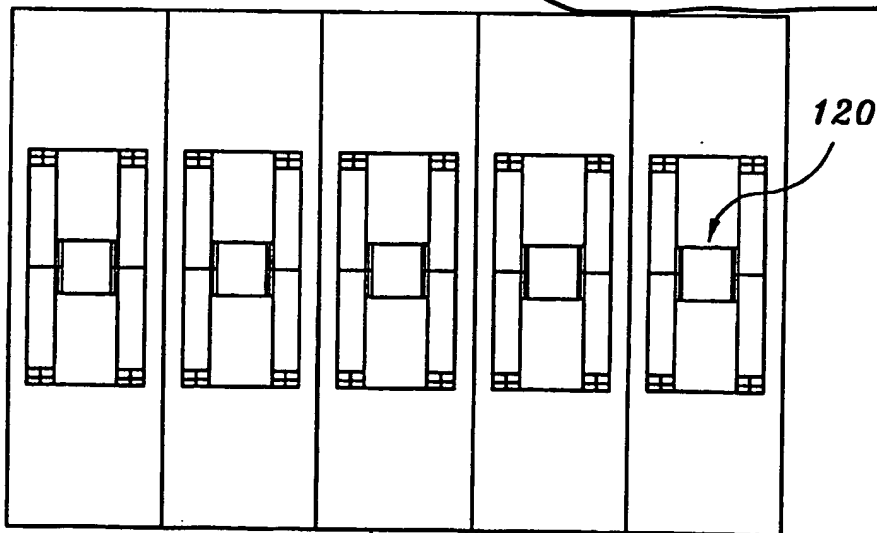


Fig. 2B

(Prior Art)

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116

Annotated Sheet Showing Changes

3/14

Fig. 3A

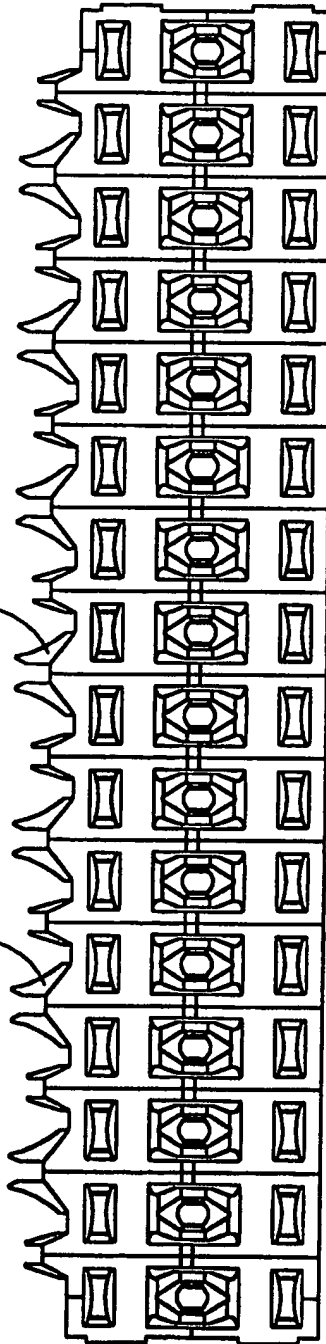
(Prior Art)

Added

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3



Annotated Sheet Showing Changes

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Fig. 3B

(Prior Art)

Added

215

